Cognition Lab

Eugenics

Introduction

Outline

Eugenics: genetic selection of human population

Eugenics in Britain

Eugenics in the United States

Nazi Germany

After WWII

Today?

Due Thursday: write Introduction section

What is eugenics?

Genetic selection of human population by positive or negative means

Positive: selective breeding

Negative: segregation, sterilization, killing

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Evidence of Eugenics in History

Sparta: phenotypic selection through infanticide

- Weak or undesirable babies were abandoned

Rome:

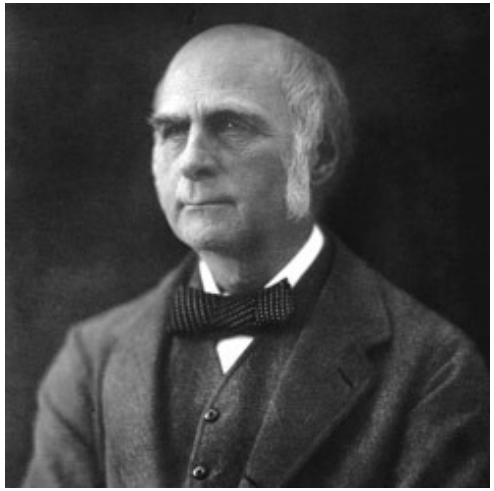
- Fourth Table of Roman stated that deformed children would be put to death

Historical Developments

- Christianity
- Statistics
- Evolutionary theory

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Sir Francis Galton



Francis Galton,1883

eu "well" + *genes* "born"

"science of improving stock"

"I object to pretensions of natural equality."

Sir Francis Galton

Inspired by Darwin's *Origin of Species*

He believed societies in favor of spending resources on the weak were in opposition to natural selection

Defined eugenics as: "the science which deals with all influences that improve the inborn qualities of a race; also with those that develop them to the utmost advantage."

His approach to eugenics was based upon social statistics

Cultural Background

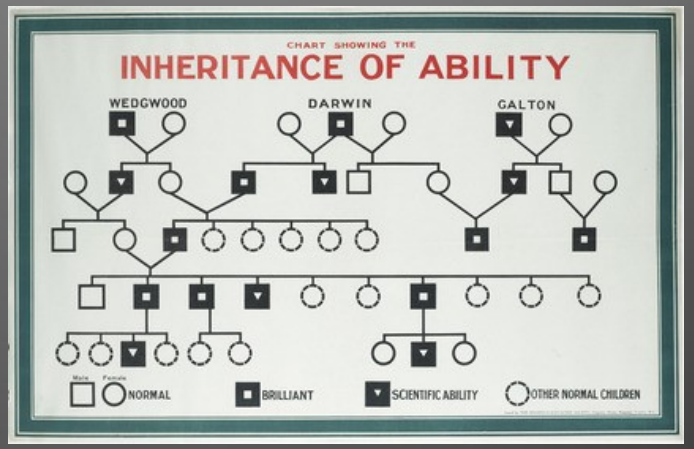
Victorian cult of *measurement* (Galton)

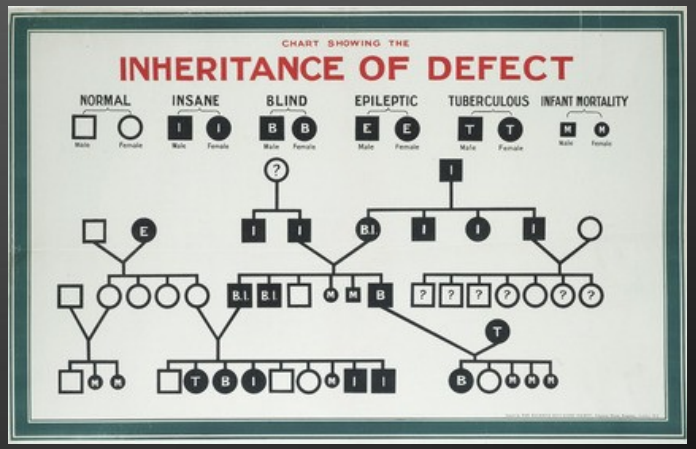
Emerging sciences of *heredity* and *statistics*

Longer-term cultures of breeding

Modernist attractions of science of eugenics

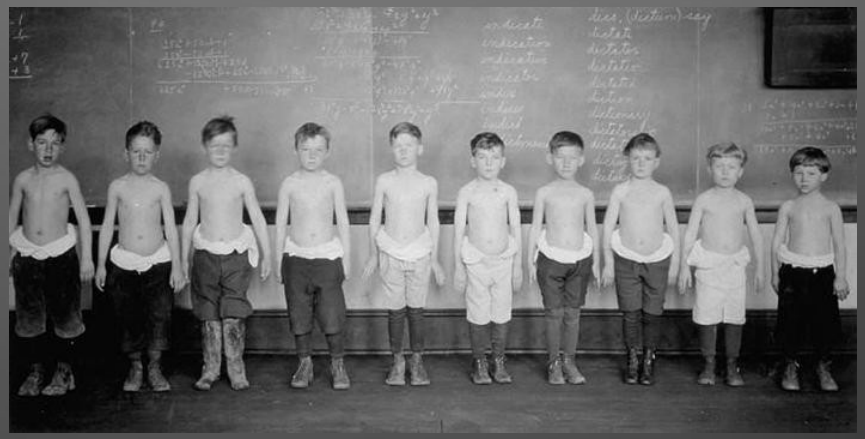
Science or pseudo-science?





New ways of seeing /ranking population

- Population problems and differences exposed by rise of mass education, and growing scale of asylums, prisons, workhouses
- Emergence of new tools such as the social survey and the psychological test to rank individuals



The contrasting intellectual status of the white versus the negro constituents of the draft appear from table 3. Few residents of the United States probably would have anticipated so great a difference. That the American negro is 90 per cent. illiterate only in part accounts for his inferior intellectual status.

TABLE 3.

INTELLIGENCE OF AMERICAN NEGRO VERSUS WHITE.

Race.	*Number of Cases*	*Percentage making grade*						
		A	B	C+	C	C—	D	D—
Whites	93,973	4·1	8·0	15·0	25·0	23·8	17·1	7·0
Negroes	18,891	0·1	0·6	2·0	5·7	12·9	29·7	49·0
Northern negroes ..	4,705	0·7	2·7	7·2	18·0	25·8	31·2	14·4
Southern negroes ..	6,846	0·1	0·2	0·7	3·4	9·6	29·2	57·0

The demographic transition

- From late 19th century a fall in fertility in western nations
- Concern in Britain about decline being most marked in middle-classes and among professionals
- In France, fear of overall population decline by early 20th century (encourages positive forms of eugenics)
- Moral objections to birth control focus attention on segregation and ‘treatment’
- Link to women’s groups, birth control advocates, and even sexual liberals

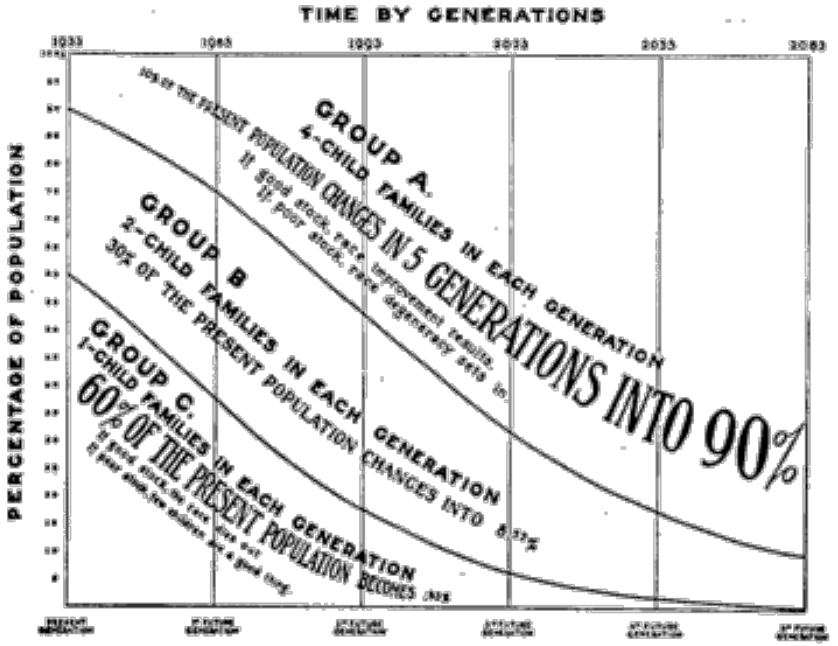
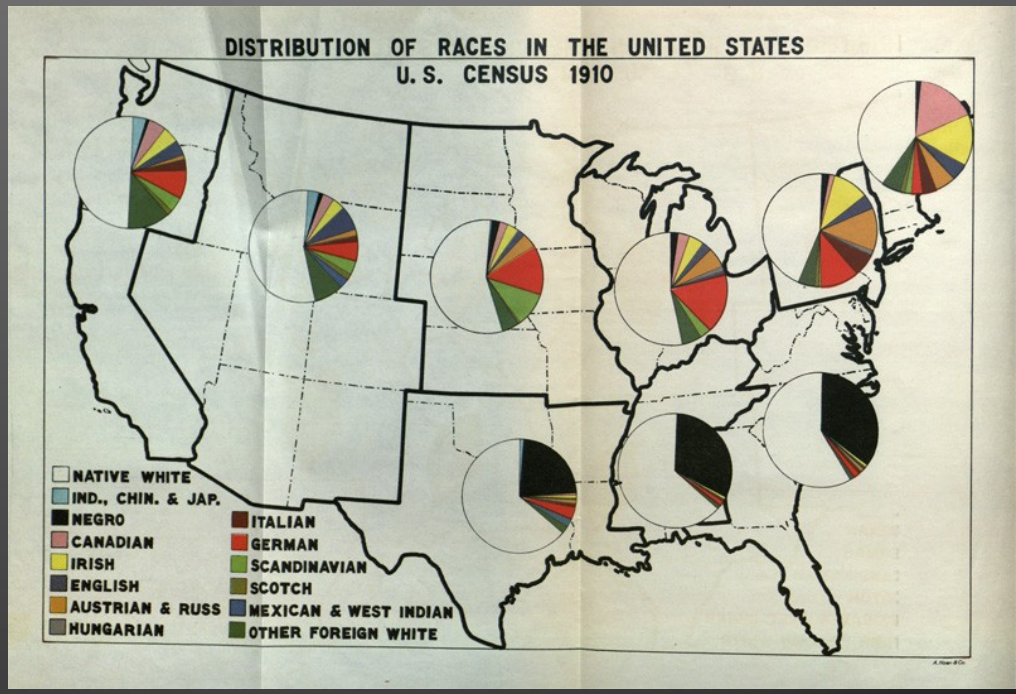


FIG. 65. — Effect of Differential Birth Rates on Future Generations. The "turn over" in population produced by differences in birth rates. It is easily seen from this chart that a group which adopts the one-child family ideal will, five generations hence, have a very small representation in the population, as compared with a group having an average of four children per family. This chart presents in summary form one of the major problems of eugenics: to encourage the better endowed part of the population to avoid a suicidal reduction in birth rate. Courtesy, *Journal of Heredity*.

U.S.: Nation building era

- Heightened concern about international competition and ‘national efficiency’
- Era of nation building and interest in defining the nation (e.g. post WWI)
- Immigrant nations concerned about racial mix

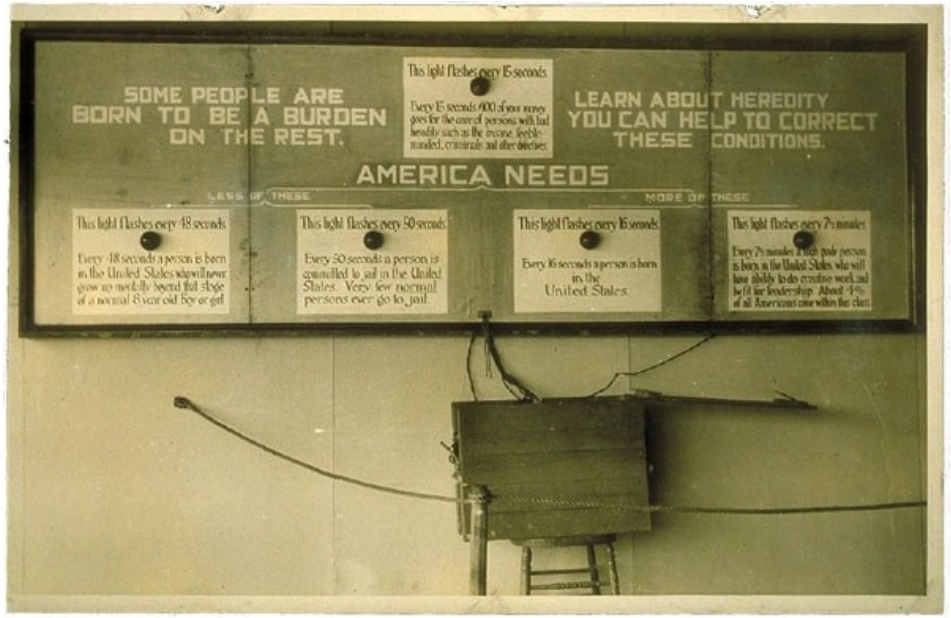


United States

Alexander Graham Bell recommended deaf individuals not be allowed to marry

Thirty states adopted legislation to perform forced sterilization on those deemed “mentally unfit.”

The burden of the “feebleminded”

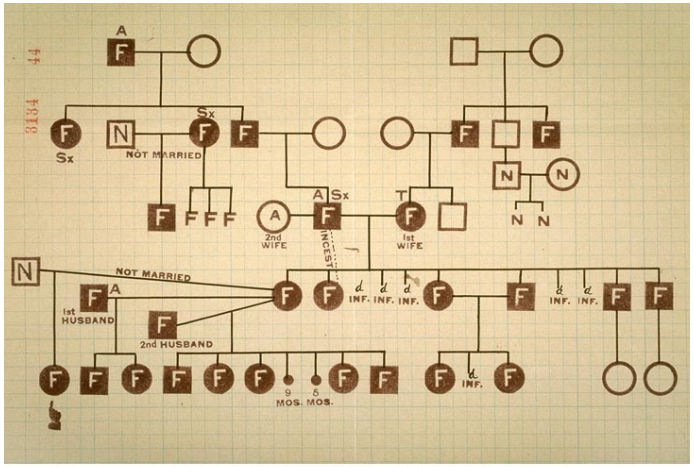


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“It is a reproach to our intelligence that we as a people should have to support about half a million insane, feebleminded, epileptic, blind and deaf; 80,000 prisoners and 100,000 paupers at a cost of over 100 million dollars per year.”

-Charles Davenport, founder of the Eugenics Record Office, 1910

Compulsory segregation and sterilization



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Eugenics Record Office pedigree showing transmission of feeblemindedness over several generations. Such evidence supported state-mandated, coerced sterilization of at least 62,000 Americans in over 30 states, beginning in 1907.

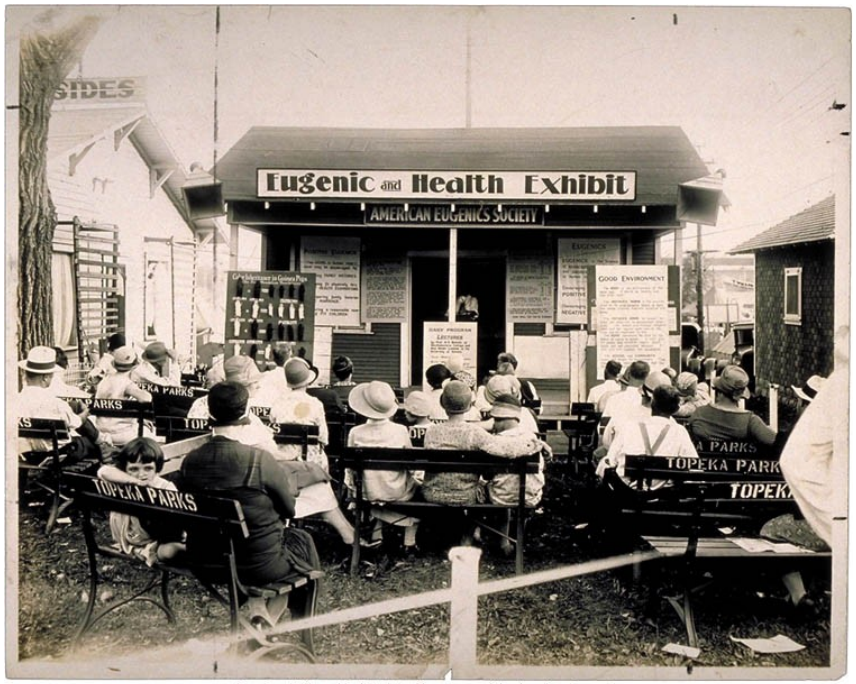
Better Babies at the Puyallup Fair, 1910s



Positive eugenics: Fitter Families contests and educational exhibits

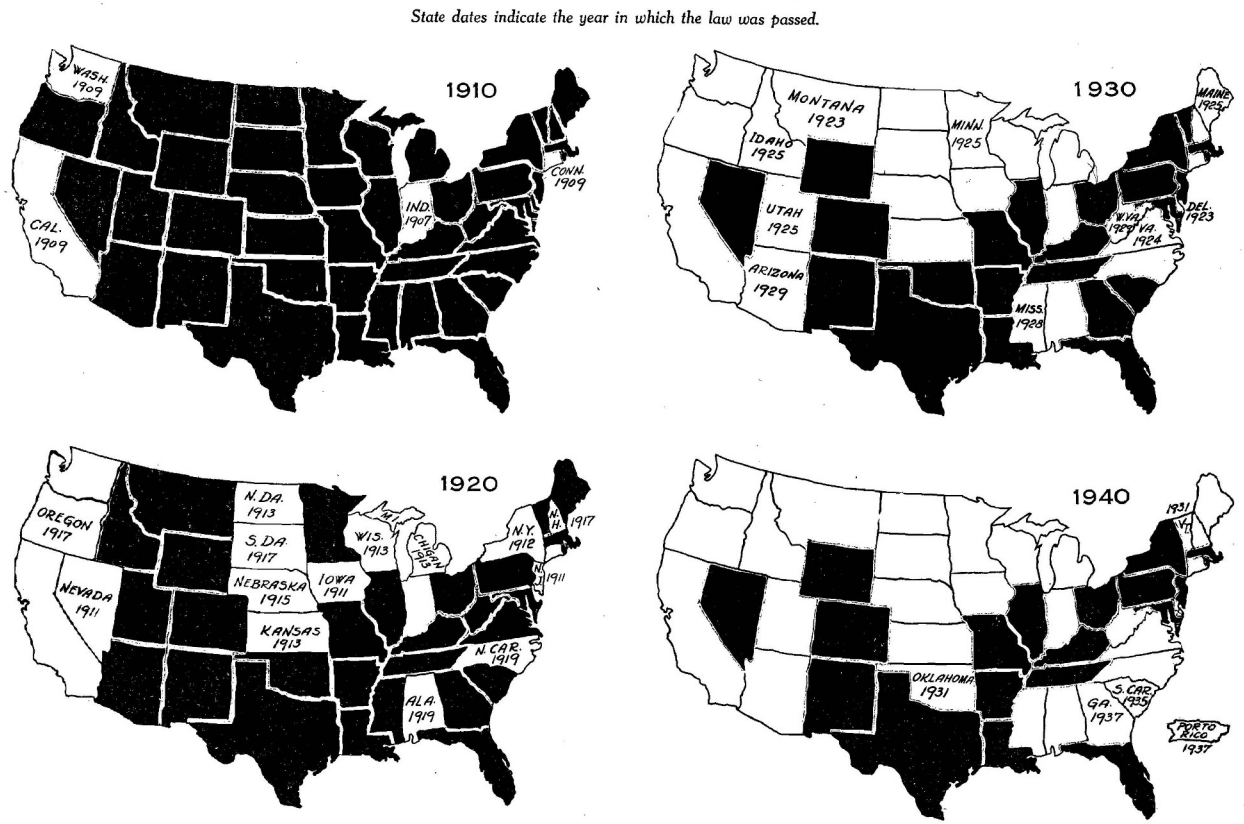


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Sterilization Laws in the US



Not ordered

"1"

At discharged

REPORT OF SUPERINTENDENT OF

Northern State Hospital

In the matter of [redacted].

To the Institutional Board of Health of Washington:

I hereby report to you [redacted] a female (sex) person, who is feeble-minded, insane, epileptic, an habitual criminal, a moral degenerate or sexual pervert, to-wit: Insane (state which), and who, by reason thereof, is potential to producing offspring who, because of inheritance of inferior or anti-social traits, will probably become a social menace or ward of the state. The said [redacted] is now an inmate of the Northern State Hospital.

Names and addresses of legal guardian, relatives or custodial guardian:

Husband: [redacted] Bellingham, Wash.

Sister: [redacted] Bellingham, Wash.

REMARKS:

Dated this 1st day of June, 1936.

Superintendent

Northern State Hospital
Institution

All cases to be acted upon by the Board must be reported to the Board quarterly on the first day of January, April, July, or October.

The inmate traits, the mental and physical condition and personal record are as follows:

Normal Disposition, bright and cheerful. Bright in school. After school worked as stenographer, capable. Pleasing personality. Last March she became excited, screamed, was irrational, Religious trend of thought. Became depressed, attempted suicide, and wanted to injure her children. Was disoriented. Memory poor. No hallucinations. Judgment and insight poor. Mal-nourished, asthenic type.

It is recommended that [redacted] Name of Patient

be Sterilized Operation

The object or purpose of operation is to prevent pregnancy.

June Date 1st 1936

Superintendent

Northern State Hospital
Institution

Section 3, Chapter 53, Laws of 1921. PURPOSE AND OBJECTS TO BE SOUGHT - Said investigation, findings and orders of said board shall be made with the purpose in view of securing a betterment of the physical, mental, neural or psychic condition of the person, or to protect society from the acts of such person, or from the menace of procreation by such person, and not in any manner as a punitive measure.

Why Nazi Germany stands out

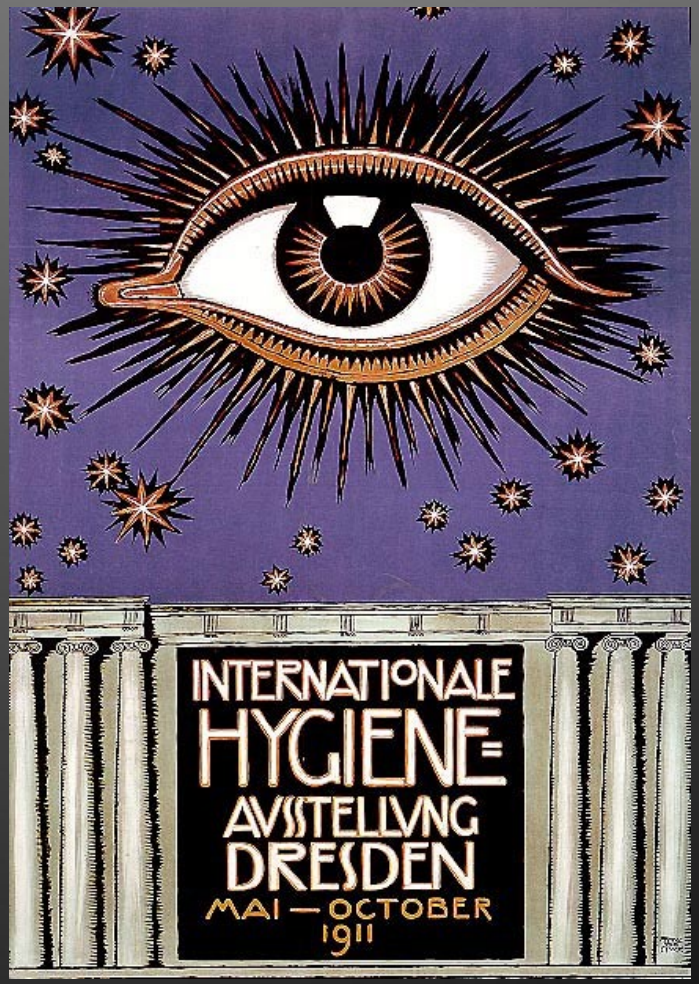
- Importance of ideology of national fitness and purity to politics and culture: ‘the ‘racial state’
- Leader in psychiatric and genetic science
- Opportunities from a sympathetic state
- Degree of economic problems via depression and mobilisation of economy in WWII
- Scale of sterilisation policy (375,000)
- Use of ‘euthanasia’ for mentally handicapped (Action T4 – 70,000)





Yet German eugenics has roots before Nazi era

- Sterilisation Law introduced before Nazis come to power
- Follows example of USA
- Eugenics and an interest in ‘race hygiene’ well established (1st society 1905)
- Germany already a leader in eugenic sciences of psychiatry and genetics, e.g. via Kaiser Wilhelm Institute (and has financial support from Rockefeller Foundation into 1930s)
- Deaths of mentally ill in German asylums in First World War (140,000)



	U.S. (and Canada)	Nazi Germany
Period	1907-late 1970s	1934-1945
Total	70,000	375,000 (= approx. 1% of adult population of childbearing age) + 70,000 killed
Disproportionately targeted	Disabled; also disenfranchised, poor, women, minorities	Same
Law	State	Federal
Compulsion	Typically formally voluntary (required formal consent)	Compulsory
Reach	Mostly only institutionalized (in a few cases, “extra mural”)	Everyone
Text of the law	Varied across states; basic elements similar	Similar to H. Laughlin’s model sterilization law
Adjudication	Typically eugenics boards; proceedings public; victims could challenge in civil court	Special “hereditary health courts”; non-public; appeal only to superior health courts
Denunciation by general public (information to commence sterilization proceedings)	No	Yes
Authorities’ access to medical and other records of kin groups	Could be extensive	Extensive

The post-war reckoning

At post-war Nazi trials the question of medical experiments is subject for prosecution, but eugenics itself in fact attracts little attention

Not until 1970s and 1980s and a new generation of historians does it come into focus



After the second World War

Eugenics is scientifically and culturally discreted

It disappears from Universities and the public discourse

But sterilizations continue in US and Scandinavia (Sweden) till the 70s

	% female victims	% mentally ill	% intellectually disabled	total	victims per year/ 100,000 pop. in peak period	sterilization period (length of time)
National	61%	44%	52%	Est. 70,000+		1907-earl.1980s (75 years)
CA	49%	58%	37%	**20,000**	**13**	**1909-60s (55 years)**
MN	78%	18%	**82%**	2,300	5	1925-earl.1960s (35 years)
VA	61%	49%	48%	7,300	**13**	1924-1979s (50 years)
IA	71%	44%	50%	1,910	6	1915-earl.1960s (35 years)
GA	55%	**77%**	22%	3,200	9	1937-1963 (25 years)
NC	**83%**	25%	70%	6,300	7	1929-1974 (45 years)

	% female victims	% mentally ill	% intellectually disabled
NC	**83%**	25%	70%

NC targeted “black welfare queens” in 1950s and 1960s; sterilization law had “extra-mural” component and allowed sterilization of populations not in state institutions

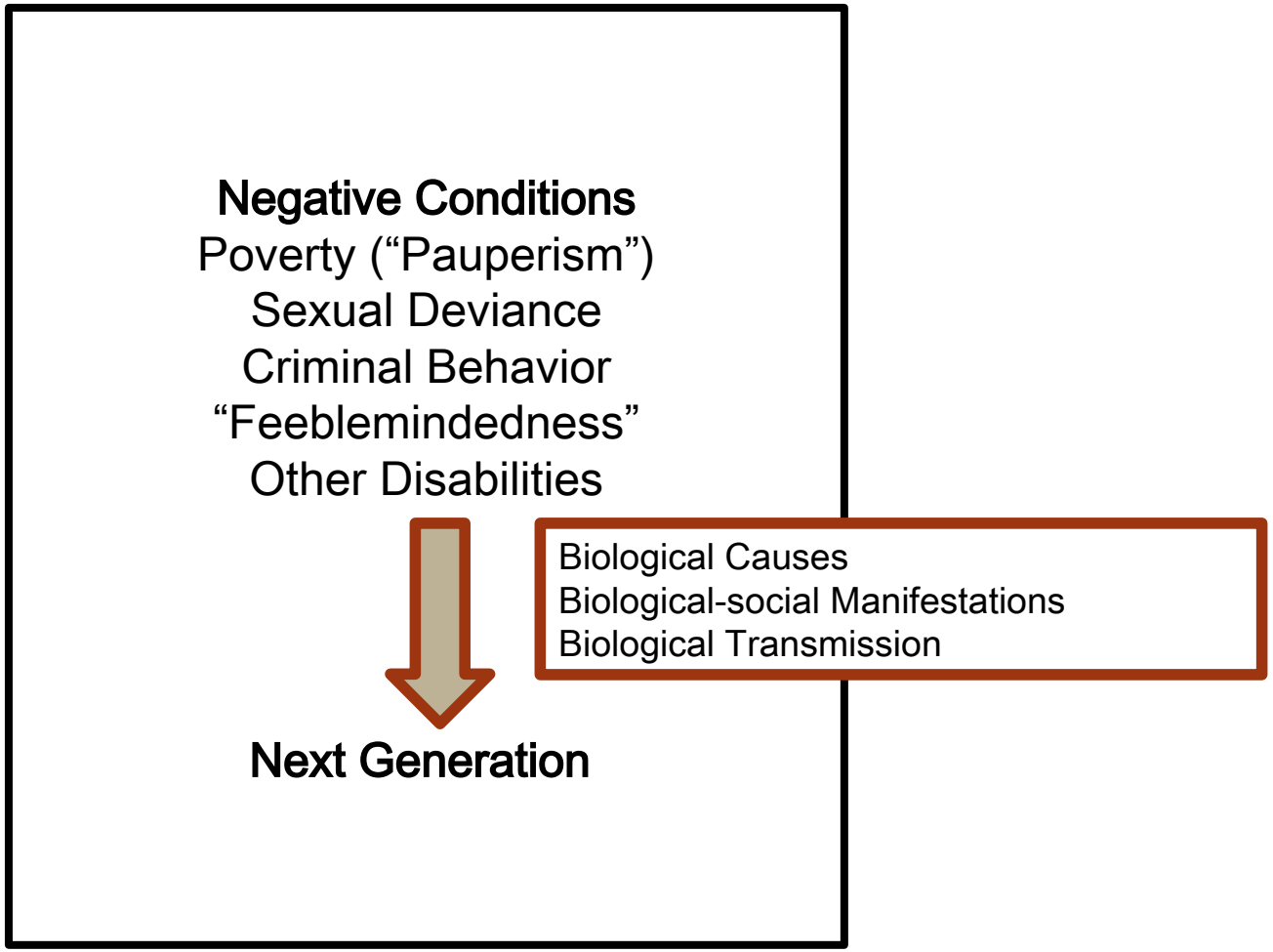
	% female victims	% mentally ill	% intellectually disabled
MN	78%	18%	**82%**

MN: strength of social progressivism with a focus on ‘helping’ intellectually disabled females; sterilization of insane required at least 6 months of continuous institutionalization and consent by individual and next of kin

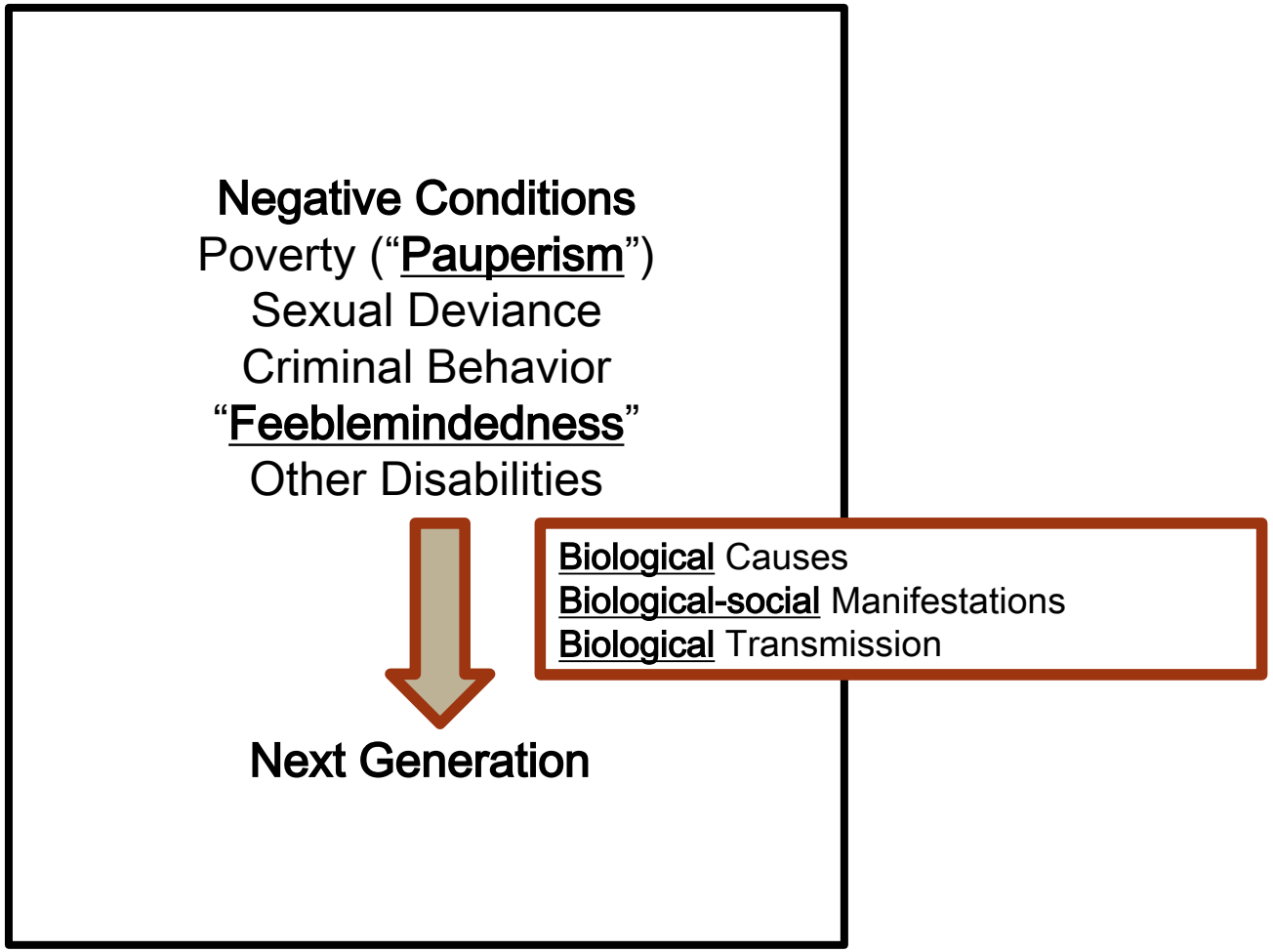
Family Studies in Order of Publication

1. Dugdale, *"The Jukes,"* 1877
   Dugdale, "Hereditary Pauperism," 1877•
2. McCulloch,[7] "The Tribe of Ishmael," 1888•
3. Blackmar, "The Smoky Pilgrims," 1897•
4. Winship, *Jukes-Edwards*, 1900
5. G. Davenport, "Hereditary Crime," 1907•
6. Goddard, *The Kallikak Family*, 1912
   Kite, "Two Brothers," 1912•
7. Danielson and C. Davenport, *The Hill Folk*, 1912•
8. Estabrook and C. Davenport, *The Nam Family*, 1912
9. Kite, "The 'Pineys,'" 1913•
10. Kostir, *The Family of Sam Sixty*, 1916•
11. Finlayson, *The Dack Family*, 1916•
12. Estabrook, *The Jukes in 1915*, 1916
13. Sessions, *The Feeble-Minded in a Rural County of Ohio*, 1918•
14. Rogers and Merrill, *Dwellers in the Vale of Siddem*, 1919•
15. Estabrook and McDougle, *Mongrel Virginians*, 1926

Biological – eugenic model



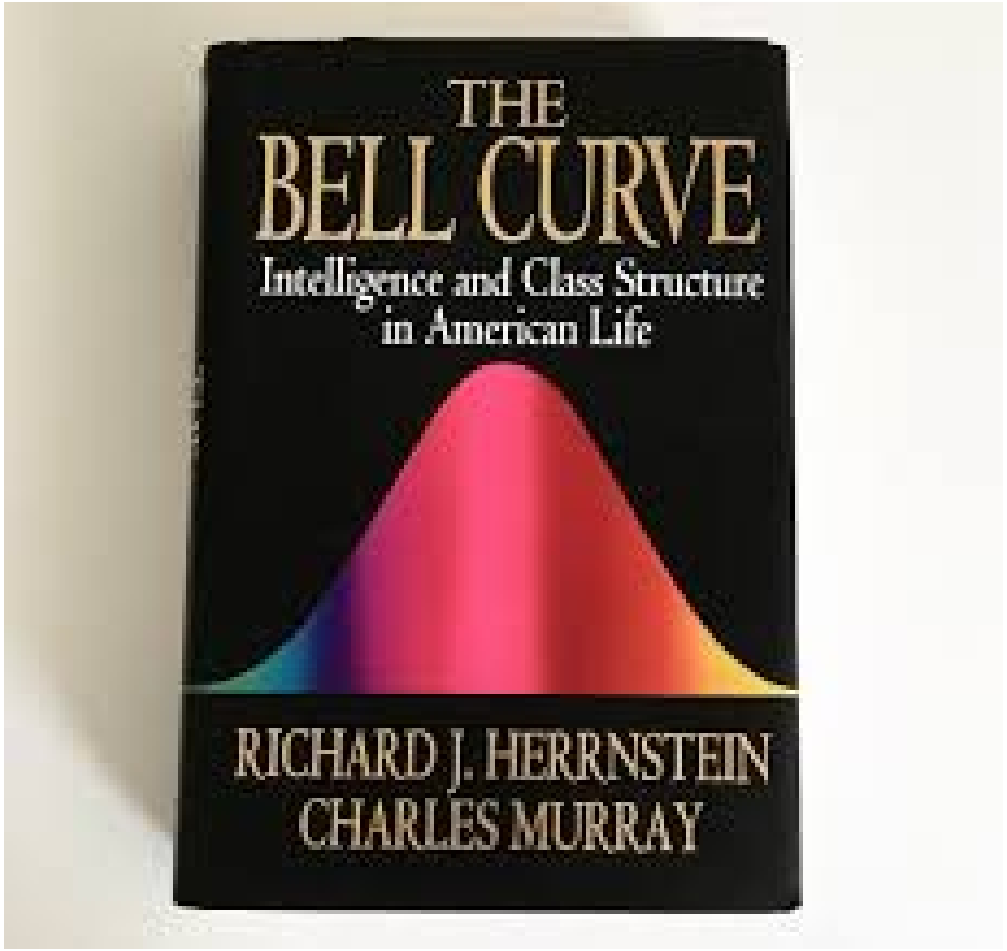
Biological – eugenic model



Eugenics as a Pseudoscience

- Made-up categories
- One encompassing explanation (interpretation Vs explanation)
- Certainty
- Appeal to authority
- Propaganda aimed to the public

Today?


THE
BELL CURVE
Intelligence and Class Structure
in American Life
RICHARD J. HERRNSTEIN
CHARLES MURRAY

Today?

Abortion is legal for serious fetal anomaly

To prevent life-long suffering for the affected

Euthanasia (for the terminally ill) is illegal but, to some extent, tolerated

Where do we draw a line?

Introduction Section

The review/introduction in the research process

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- Come up with an idea, with a **question**
- Think about an experiment?
- Quick Google search, one or two papers
- **Systematic review**
- Run experiment
- Write methods / results
- Now write the introduction

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How to write an Introduction

An introduction is a little like writing an essay

It should try to answer the following questions:

- Broadly introduce the area you are investigating. You may need some definitions
- What has been done in this area of psychology before? In other words, review the current literature (theories/findings) about the topic you are investigating. Are their any inconsistencies/problems in the research so far?
- What was the point/purpose of your study?

Introduction

- State your hypothesis explicitly (but informally) towards the end of your introduction. This often means making reference to the IV(s) & DV (but informally)
  - E.g. 'This study looks at whether the amount of alcohol drunk and the gender of the consumer has an effect on the attractiveness of the mate selected.'
- What do you expect or predict may happen? If you have an expectation then say so.
  - E.g. 'Based on previous research discussed earlier, it is predicted that attractiveness ratings will increase as alcohol amount increases, but only for males. Attractiveness ratings made by female participants are not expected to be influenced by alcohol consumption.'

Introduction – Providing a rationale

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Possible reasons/rationale for a study

- To support/test a specific theory/idea
- To replicate/confirm an existing finding
  - A replication with a different sample
- To extend the findings of previous research
  - Often a replication with a change in method
    - State what differences are between your study and an existing study
- To distinguish between different theories or resolve an anomaly (e.g. Contradictory results from previous studies)
- To plug as gap in existing knowledge

The introduction doesn't need a separate heading

TIP: Do not state the null hypothesis in the introduction. You can assume that the reader knows what a null hypothesis is.

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Finding journal articles

There are many places you can search for journal articles:

- from the references given in the text book or review article
- Google scholar (like google but gives for academic papers):

  https://scholar.google.com/
- pubmed (more biological, good for neuroscience): https://www.ncbi.nlm.nih.gov/pubmed/
- PsycINFO (but requires several steps to authenticate when off campus)
  https://www.apa.org/pubs/databases/psycinfo/index

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Finding journal articles

You can also check these two journals for papers related to your topic:

Current opinion in Psychology

https://www.journals.elsevier.com/current-opinion-in-psychology

Current Opinion in Behavioral Sciences

https://www.journals.elsevier.com/current-opinion-in-behavioral-sciences

Why?

They have annotated bibliographies.

Building a body of knowledge

- Intro: textbook + book on special topic or classic



Building a body of knowledge

- Intro: textbook + book on special topic or classic
- Seminar: articles, maybe a book (see above)



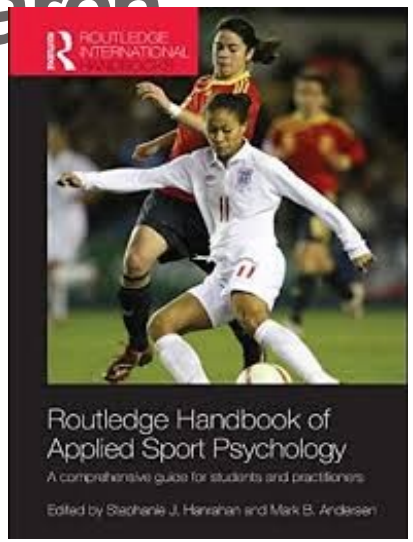
Building a body of knowledge

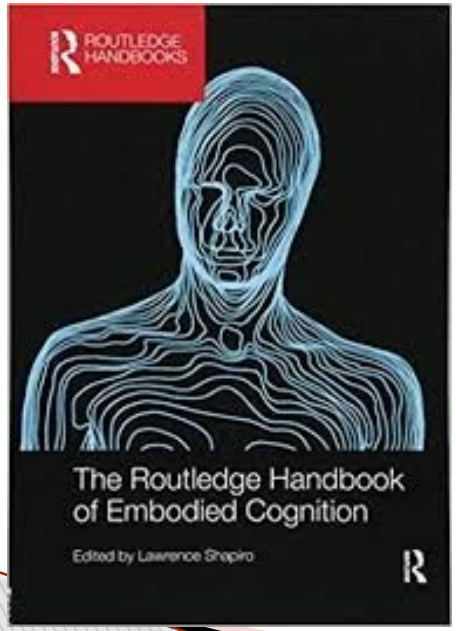
- Intro: textbook + book on special topic or classic
- Seminar: articles, maybe a book (see above)
- Research: a ton of articles

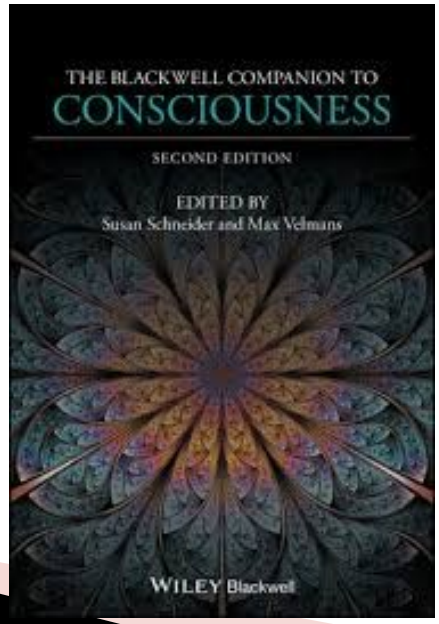


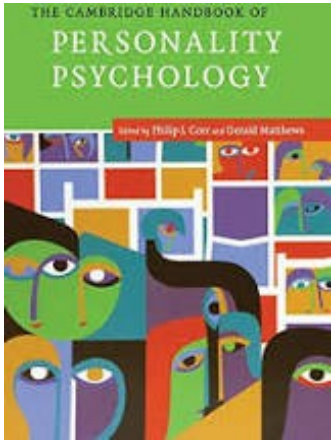
The best kept secret in Research

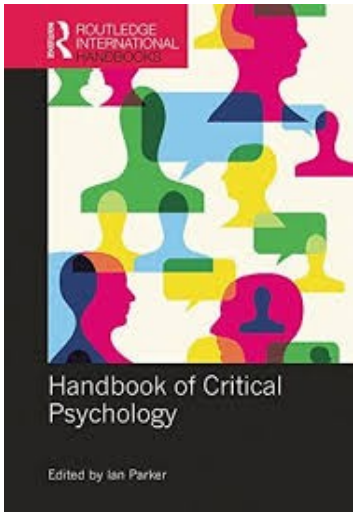
- Handbooks!
- And also Companions, Dictionaries, Encyclopedia











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When to use a handbook

- Use field-specific handbooks, encyclopedias, dictionaries:
  - As your entry point in a new field or topic
  - To keep up to pace with latest developments
- Handbooks etc. are re-issued every few years

Extra slides on how to write an Introduction

RUTGERS

The following slides come from the presentation “Basics of Scientific Writing”, available on Sakai

General Guidelines

- **Audience**

When writing a scientific paper, you need to write as though the reader knows nothing about the topic.

Pretend you're taking a Social Psychology class, and your instructor is curious about what experiments cognitive psychologists are doing. This instructor asks to read the paper about your project to learn about what you're doing.

The Social Psychology instructor is a scientist, so you don't need to write for a layperson, but does not know the specifics about the field.

Introduction

Purpose of the introduction section

The introduction is arguably the most crucial section of a report because it sets the stage for the entire experiment. In this section the reader learns the story behind your experiment: what happened before you came along, what question has yet to be answered, and how you intend to answer it. A good introduction has the following elements:

Research topic: the topic you're interested in

Background: the literature review

Hypothesis: The problem you're addressing

Brief description the experiment: How you intend to address the problem

Introduction

Research topic

Before you start explaining what you're doing, you need to gradually draw the reader in by acquainting them with the broader research topic.

> Let's say your experiment was about the way people categorize furniture. You might have a brilliant experiment that could decide whether the function of the furniture or the room the furniture appears in is more important. If you want someone to read and understand your paper, you need to give them a reason to be interested in categorization to begin with. Why does the way we categorize things matter?

A common approach to this is to give an example that most people would be familiar with from everyday life. You did something similar when we learned about pitch discrimination!

Introduction

Background

Before you talk about your experiment specifically, you need to explain the related work that other scientists did before you. In addition to setting the stage for your experiment, you also need to give them credit for their ideas. You may have come up with a hypothesis, but scientific thinking doesn't happen in a vacuum. That means you learned about a topic that interested you, and then you decided you wanted to learn more. You can't assume the reader has learned the same thing, or interpreted it in the same way you did. You need to explain your perspective to the reader as if they know nothing about it so that everyone is on the same page.

The background should answer these questions:

1. What do we know already? This includes similar experiments that your experiment may be based on.
2. Is there disagreement in the field over the topic?

Introduction

Background

When writing the background, be careful not to make claims without backing them up with evidence!

For example, if you say something like "Previous studies on categorization suggest that category membership is not discrete", you need to cite work that has actually made that claim (for this example, Rosch, 1978). Making sure we have evidence to back up our claims is what separates science from opinion.

Introduction

Background

To give someone credit for an idea, include the **last name(s) of the author(s)** and the year of the publication.

Example: Previous work suggests category membership is not discrete (Rosch, 1978).

> This refers to a paper called *Principles of categorization* written by Eleanor Rosch. But we don't need all that information to correctly identify the paper. **Who** wrote the paper and **when** they wrote it is what matters.

Do not include the title of the paper! Nobody cares, and it just wastes space!

Introduction

Hypothesis

This part is extremely important because it's where you need to state your theory and hypothesis. Doing so clearly and concisely is a challenge.

Start off by explaining what problem has yet to be solved (the one you *intend* to solve with your experiment). This will help transition from the background literature to the current study.

Start with the theory. This is how you think some aspect of cognition or perception works. For example, you might have a theory that we categorize furniture based on the function of the furniture and the room it is found in. Under that theory, a couch is living room furniture because we usually sit on couches in order to relax, and living rooms are used for recreation/relaxation. Your hypothesis to test this could be: furniture that is not usually associated with a living room or a kitchen would be categorized with one or the other based on its function. An alternative hypothesis, if your theory is not correct, is that ambiguous furniture would be arbitrarily assigned to one category or the other.

Introduction

Brief description of the experiment

Now that the reader knows why you are doing your experiment and what the hypothesis is, the next thing you need to do is give a brief overview of the experiment. Don't go into too much detail, because that's what the method section is for.

First, give a general description of the experiment. What kind of task are you using? How is the task you're using an appropriate way to test the hypothesis? Define the independent variable(s) and the dependent variable(s). The **independent variable** is anything that you manipulate in order to test the hypothesis. These are often identified by conditions (e.g., word-color congruence for the stroop task). The **dependent variable** is what you are measuring. This could be percent correct, reaction time, etc.

Introduction

Brief description of the experiment

The last thing you need to do before the method section is state your predictions in terms of the variables. For example, two slides above we introduced the (made up) hypotheses that 1) ambiguous furniture would be categorized based on its function or 2) ambiguous furniture would be categorized arbitrarily.

Let's say you run a decision experiment where participants are shown images of unfamiliar furniture and are asked to group it with either living room furniture or kitchen furniture, and they do this by pressing one key to decide *living room* and another key to decide *kitchen*. The prediction for hypothesis 1 would be that furniture that appears more comfortable and/or entertaining should be assigned to the living room more frequently, and more quickly. The prediction for hypothesis 2 would be that unfamiliar furniture should be assigned equally often to either furniture category. By stating the predictions and connecting them to the hypothesis, the meaning of the results of the experiment will be easier for the reader to understand.

Introduction

RULE OF THUMB: The shape of the Introduction

You might want to think of the Introduction as the upper part of an hourglass. You should start writing about the broad stuff (research topic and background) and then narrow things down to your specific hypothesis and experimental approach.



Introduction

Methods

Results

Discussion

Introduction

RULE OF THUMB: The shape of the Introduction

(tip: a nice way to introduce the “Research topic” is to narrate a personal anecdote)



- Research topic

- Background

- Hypothesis

- Brief description the experiment